



BT's quest for 2021 Young Scientist is a virtual success

As the organiser of the BT Young Scientist & Technology Exhibition (BTYSTE) for the last 21 years, we were determined it would go ahead this year despite the global pandemic. We made it happen through a combination of our own technology, the capabilities of our people and teamwork. The BTYSTE experience was created using best-in-class collaboration technologies, aligned as a single virtualised platform, accessible globally.

Overview

Over 1,350 projects were entered into BTYSTE 2021 with over 550 projects from 213 schools qualifying to take part. A combination of coronavirus and lockdown forced us to virtualise an event that typically draws between 45,000-55,000 people over four days to the RDS in Dublin, for the first time in its history. We rose to the challenge and the event took place in January 2021 and still managed to capture the excitement of the exhibition whilst gaining a new global audience in the process. With over 105,000 attendees from 77 countries, the virtual event proved to be a great success for all involved.



The challenge

A mainstay in Ireland's national calendar for 57 years, BTYSTE is also a highlight in the school year and a life-changing STEM (Science, Technology, Engineering and Maths) event for many students. When coronavirus led to uncertainty around schools being open in March 2020 and the likelihood of the physical exhibition being cancelled in January 2021, we had numerous discussions with stakeholders on how to proceed. In April it was decided to leverage our technical expertise and work with our partners to deliver a virtual event.

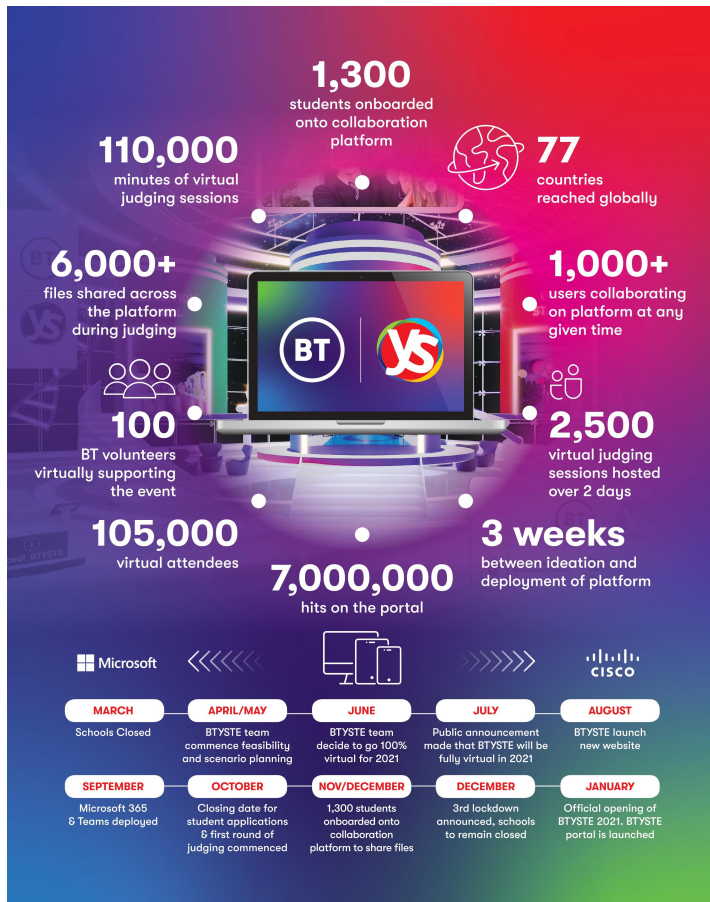
"We looked at the possibilities of a hybrid version, with students and judges getting together for the competition part, but in the end we decided it was too risky and to do it all virtually," explained Mari Cahalane, Head of BTYSTE. "As a technology company, BT was confident we could make it happen, but more than that, we wanted to make sure we continued to deliver an event that has been running for 57 years."

The big challenge in taking it online was virtualising a tried-and-tested exhibition programme in such a tight timeframe, with the constantly evolving threat of coronavirus in the background. Three key areas needed to be addressed:

- Judging, presentations, and exhibition – a key priority was replicating the assessment process in the BT Young Scientist competition and ensuring entries could be viewed by the public.
- Sponsors, shows and events – a virtual equivalent of exhibition and partner stands, fringe-events and on-stage shows, was needed to showcase the STEM-related content to the public.

- Special events – the opening and closing ceremonies, including the unveiling of the BT Young Scientist & Technologist of the Year were ‘live’ highlights that would need to be streamed.

A move to online would also demand strict governance around security and data integrity as well as the resilience of the virtual environment – going offline was not an option. All of the solutions were well within the capabilities of BT and its ecosystem; the challenge was selecting the right partners with the necessary capabilities to deliver the best experience.



The solution

A standard solution was not going to be able to support what we needed for a bespoke event like BTYSTE. Off-the-shelf virtual solutions were quickly rejected as we set out to produce a custom-built web portal that could capture a multi-faceted event with so many moving parts. It was designed to showcase a student project space, on-stage areas, virtual rooms, sponsor stands and an exhibition hall.

The portal included an area for exhibitor stands, one of the ways for partners and sponsors to virtually present themselves. Key sponsors for BTYSTE include The Department of Education, Cisco, Analog Devices, Perrigo, and RTE.

Microsoft 365 and Teams was identified as the main communication and collaboration platform for students, a core requirement for sharing and showcasing projects entries, as well as video interviews in the judging process. Microsoft is a BT global partner and set up a dedicated 365 tenancy to support the event, mobilising 1,300 students with their own accounts to participate from home, with a consistent user experience. This tenancy was deployed quickly in under a month, enabling first-round judging from October. The capabilities of MS Teams allowed for ease of scheduling, recording of judging sessions and screen-sharing of projects, with custom BTYSTE Teams backgrounds for students. With privacy and security built into the Microsoft cloud platform, BT had a robust and resilient foundation for the most complicated part of the event.

“As well as being a large Microsoft 365 user, BT is a Global Microsoft Gold Partner and reseller with core competencies in enabling it for our clients, so it was an obvious choice. But what convinced us was finding out that it was already used by a lot of schools,” explained Alan Behan, Systems Engineer at BT. “With minimal advanced training, students and judges used the online meeting capabilities of Microsoft Teams, including video and desktop sharing. It was a perfect solution for lockdown and coronavirus restrictions.”

Another key BT partner and long-standing sponsor for BTYSTE was Cisco – BT is one of four Gold Partners globally. The Cisco Webex conferencing platform was leveraged to host Nextipedia, the BT business innovation symposium, attracting over 400 participants. The solution enabled keynote speakers such as Aron Ralston to participate in the event from all over the world.

For the opening and closing live events, footage was captured and streamed in real time from the BTYSTE Facebook site as well as the portal. The Mansion House in Dublin, which is where the first ever BT Young Scientist event took place, was used for shooting pre-recorded videos as well as the live events. Wrapped around it all was BT expertise and innovation, with over 100 employees directly involved. Some brought technical skills from their day jobs to the task of virtualising a physical event; others used their project management and organisational skills, hosting all judging sessions with students, chasing down content, checking for copyright issues, making sure immovable deadlines were always met.

The result

BTYSTE 2021 was a huge success. Over 1,350 projects were entered with over 550 from 213 schools qualifying to take part in the event. Whittling down the entries were 85 judges, carrying out their assessments remotely, taking part in over 2,500 Teams interviews with students over two-days. Scheduled and hosted by BT employees, 110,000 minutes of audio and 107,000 minutes of video were recorded in that period.

The centrepiece of the event was the Student Projects area of the portal, searchable by keywords and the four subject areas: Biological and Ecological; Social and Behavioural Science; Chemical, Physical & Mathematical and Technology. It contained content from every qualified entry, a written synopsis and a video clip of a student explaining the project.

The three-day virtual event attracted more people than ever before to BTYSTE, with 105,000 unique visitors to the portal from 77 countries. Seven million hits were spread across the portal; content was accessed from 54,000 devices and over 250,000 minutes of video were watched.

Going online succeeded not just in enabling the event to take place during the pandemic, but in bringing it to a wider audience. Such virtual gains will be retained when the normal exhibition resumes, as we look to build on a newly found global audience. Features like the teacher's resource area, which also used Cisco's Webex platform, will be kept. By logging in, teachers could access live, pre-recorded and downloadable content for use in the classroom or take part in virtual seminars and talks.

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Mari Cahalane

Head of the BT young Scientist & Technology Exhibition

Journalists also enjoyed a virtual media centre where they could access press materials and interact with PR personnel. Live and pre-recorded events provided a rich source of STEM-related content, including Professor Luke O'Neill's very topical talk about developing vaccines during a pandemic. The live events were successfully streamed and recorded from the Mansion House, starting with President Michael D. Higgins' opening address and closing with 17-year Gregory Tarr picking up The BT Young Scientist & Technologist of the Year Award for an ingenious software tool that can detect state-of-the-art deepfakes.

Summing up the success of the project, Mari Cahalane put it down to the commitment of all involved. “BT’s prowess in technology was a good starting point for delivering a virtual event in very trying conditions, but it was the commitment of people that got us over the line – BT employees and our partners,” she said. “School students are eligible to enter BTYSTE for a limited number of years; we didn’t want to limit them further by cancelling. We are delighted that it all worked out and, once again, we got to showcase Ireland’s extraordinary young talent.”

